


### Technical characteristics

- Flow rates: from 0,22 to 19,0 lph @ 50Hz
- Max Pressure: 120 bar
- Ambient temperature: -10 °C + 40 °C
- Max altitude: 1000 m (A.S.L.)
- Fluid operating temperature: -10 °C + 70 °C
- Viscosity up to 1000 cP (Higher on request)
- Stroke adjustment during operation from 0 to 100%
- Accuracy  $\pm 1\%$  on the turndown ratio 10:1
- Built-in overpressure valve
- Min NPSHr: 3 mwc  $\rightarrow$  High suction capability
- Double diaphragm and diagnostic of the rupture
- Diaphragm duration up to 20.000 hours, depending of the application
- Multiheads (up to six) solutions
- API 675 compliance
- CE marking
- ATEX  II 2 G c IIB T4 compliance
- Protection: IP 55
- Epoxy painting at 125 micron

**nexa series** includes plunger and hydraulic diaphragm dosing pumps designed in compliance with **API 675 Standards**; the conformity to the API Standards implies a “heavy duty” design, high safety and severe controls of the performances during the tests. The broad variety of heads execution offers a wide selection of dosing pumps to cover practically any application needs. In addition the full compliance with the **ATEX** European Directive gives the possibility to install these pumps in classified areas too.

### Mechanism

Available in different sizes, they are mechanical return type, giving the maximum reliability in all working conditions.

General Specifications:

- Low noise integral gearbox, worm type, oil bath lubricated
- Reduced energy consumption based on low friction rolling bearings design
- High flexibility multiple mechanism solution to permit different piston speeds (SPM) on the same group
- Micrometric stroke length adjustment both manually and/or automatically actuated.
- Automatic stroke length variation by electrical servomotor, pneumatic actuator or frequency converter
- Linearity and repeatability in compliance with API 675 Standards.
- Easy “on field” installation of electrical servomotor on manual stroke adjustment mechanism.

### Diaphragm Pumphead

- High capacity flexibility  $\rightarrow$  On site easy volume changing by changing the piston cartridge
- Easy to change spares parts (all “one cartridge” solution).
- Maximum compatibility PTFE diaphragm
- Visual or remote diaphragm failure detection

### PUMP KEY CODE

| 1°    | Number of pump head   |           |       |            |            |
|-------|---|-----------|-------|------------|------------|
| 1     | Simplex pump  |           |       |            |            |
| 2°    | Type of pump head (double diaphragm or packed-plunger)  |           |       |            |            |
| T     | Double diaphragm with built-in overpressure valve, air-bleed valve and mechanically actuated oil replenishing |           |       |            |            |
| 3°/4° | Plunger diameter  |           |       |            |            |
| 06+20 | from 6 to 20 mm   |           |       |            |            |
| 5°/6° | Mechanism model   |           |       |            |            |
| NO    | Stroke length 10 mm   |           |       |            |            |
| 7°/8° | Pump head material  |           |       |            |            |
| 2F    | HEAD  | DIAPHRAGM | BALL  | VALVE SEAL | VALVE SEAT |
|       | 316SS   | PTFE      | 316SS | 316SS      | 316SS      |
| 9°    | Valve type  |           |       |            |            |
| B     | Double balls  |           |       |            |            |
| C     | Triple balls  |           |       |            |            |
| 10°   | General options   |           |       |            |            |
| 7     | Standard execution  |           |       |            |            |
| 11°   | Flow rate adjustment  |           |       |            |            |
| M     | Manual with adjustment knob (Standard execution)  |           |       |            |            |
| E     | Electric actuator   |           |       |            |            |
| P     | Pneumatic actuator  |           |       |            |            |
| 12°   | Gear ratio  |           |       |            |            |
| F     | 1:15  |           |       |            |            |
| I     | 1:20  |           |       |            |            |
| L     | 1:25  |           |       |            |            |
| 13°   | Electric motors poles   |           |       |            |            |
| 2     | 2 poles   |           |       |            |            |
| 4     | 4 poles   |           |       |            |            |
| 6     | 6 poles   |           |       |            |            |
| 14°   | Installed power   |           |       |            |            |
| A     | 0,12 kW   |           |       |            |            |
| B     | 0,18 kW   |           |       |            |            |
| 15°   | Pump head options   |           |       |            |            |
| V     | Visual diaphragm failure detection (Standard execution)   |           |       |            |            |
| R     | Remote diaphragm failure detection  |           |       |            |            |
| 16°   | Mechanism options   |           |       |            |            |
| 0     | Standard execution  |           |       |            |            |
| 5     | Compliance with regulation "ATEX" 94/4/CE II 2 G c IIB T4 (for zone 1)  |           |       |            |            |

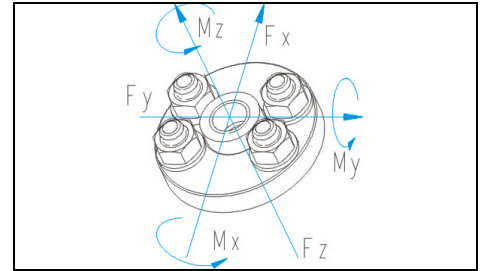
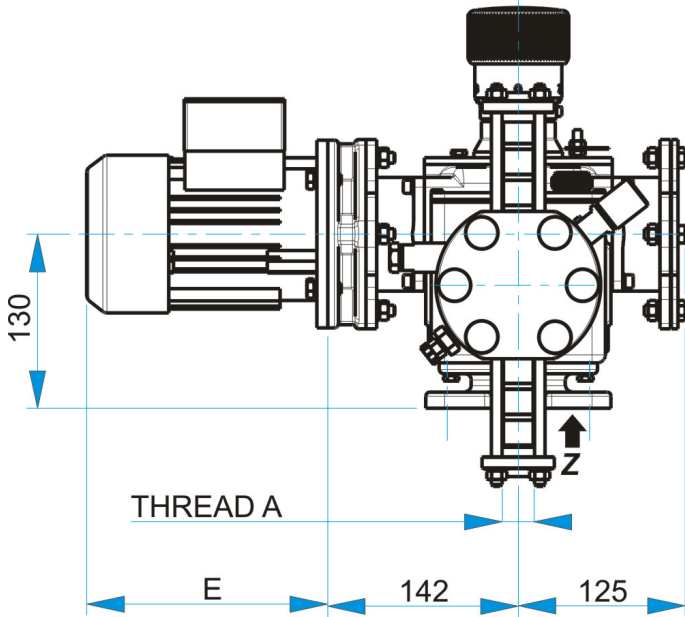
|   |   |    |    |    |   |   |   |   |   |   |   |   |
|---|---|----|----|----|---|---|---|---|---|---|---|---|
| 1 | T | 06 | NO | 2F | B | 7 | M | L | 6 | A | V | 0 |
|---|---|----|----|----|---|---|---|---|---|---|---|---|



### HYDRAULIC CHARACTERISTICS

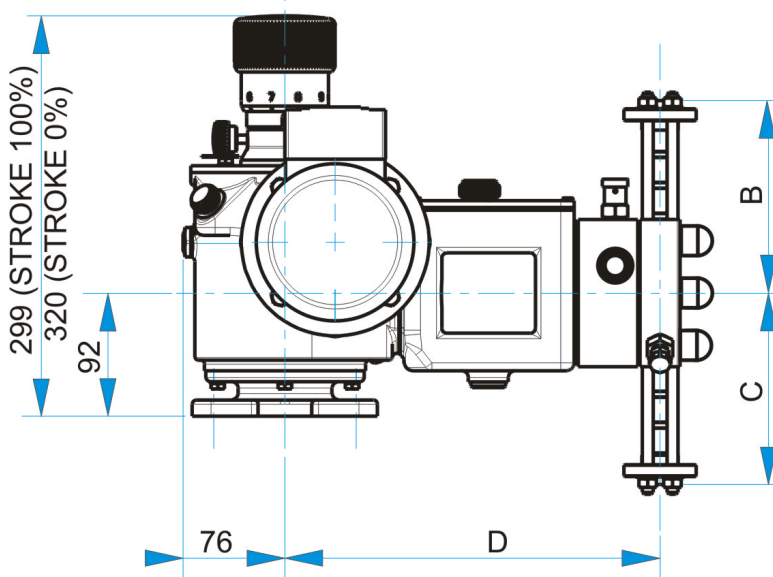
| Performances: |   |   |   |   |   |   |   |   |   |                                 |              |                                 |                                  |                   | 50 Hz               |           |        | 60Hz              |                 |      |        |     |        |     |      |        |
|---------------|---|---|---|---|---|---|---|---|---|---------------------------------|--------------|---------------------------------|----------------------------------|-------------------|---------------------|-----------|--------|-------------------|-----------------|------|--------|-----|--------|-----|------|--------|
|               |   |   |   |   |   |   |   |   |   | 0,22/19,0<br>120/57             |              | l/h<br>bar                      | gph 0.07/6.02<br>p.s.i. 1740/827 |                   | Liquid end material |           |        |                   | <b>316L</b>     |      |        |     |        |     |      |        |
|               |   |   |   |   |   |   |   |   |   | Flow rate at<br>max<br>pressure | Max<br>speed | Flow rate at<br>max<br>pressure | Max<br>speed                     | Electric motor kW |                     |           |        | Suc/Dis<br>Connec |                 |      |        |     |        |     |      |        |
|               |   |   |   |   |   |   |   |   |   |                                 |              |                                 |                                  | 0,12<br>A         |                     | 0,18<br>B |        |                   |                 |      |        |     |        |     |      |        |
| Pump Model    |   |   |   |   |   |   |   |   |   |                                 |              |                                 | Max pressure                     |                   |                     |           | Ø BSPP |                   |                 |      |        |     |        |     |      |        |
|               |   |   |   |   |   |   |   |   |   |                                 |              |                                 | lph                              | gph               | Strokes<br>/min     | lph       |        | gph               | Strokes<br>/min | bar  | p.s.i. | bar | p.s.i. |     |      |        |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 0,22      | 0,06   | 37                | 0,27            | 0,07 | 45     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 0,30      | 0,08   | 47                | 0,37            | 0,10 | 56     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 0,38      | 0,10   | 56                | 0,45            | 0,12 | 67     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 0,49      | 0,13   | 70                | 0,59            | 0,16 | 84     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 0,68      | 0,18   | 93                | 0,81            | 0,21 | 112    | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 6 | N | 0 | 2 | F | C | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 0,83      | 0,22   | 112               | 1,00            | 0,26 | 134    | -   | -      | 120 | 1740 | 1/4" F |
| 1             | T | 0 | 8 | N | 0 | 2 | F | C | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 0,78      | 0,21   | 47                | 0,94            | 0,25 | 56     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 8 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 0,97      | 0,26   | 56                | 1,16            | 0,31 | 67     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 8 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 1,25      | 0,33   | 70                | 1,51            | 0,40 | 84     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 8 | N | 0 | 2 | F | C | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 1,73      | 0,46   | 93                | 2,07            | 0,55 | 112    | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 0 | 8 | N | 0 | 2 | F | C | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 2,12      | 0,56   | 112               | 2,54            | 0,67 | 134    | -   | -      | 120 | 1740 | 1/4" F |
| 1             | T | 1 | 0 | N | 0 | 2 | F | C | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 1,25      | 0,33   | 47                | 1,50            | 0,40 | 56     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 0 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 1,64      | 0,43   | 56                | 1,97            | 0,52 | 67     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 0 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 2,24      | 0,59   | 70                | 2,69            | 0,71 | 84     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 0 | N | 0 | 2 | F | C | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 3,23      | 0,85   | 93                | 3,88            | 1,03 | 112    | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 0 | N | 0 | 2 | F | C | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 4,05      | 1,07   | 112               | 4,86            | 1,29 | 134    | -   | -      | 120 | 1740 | 1/4" F |
| 1             | T | 1 | 2 | N | 0 | 2 | F | C | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 2,27      | 0,60   | 47                | 2,72            | 0,72 | 56     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 2 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 2,71      | 0,72   | 56                | 3,25            | 0,86 | 67     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 2 | N | 0 | 2 | F | C | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 3,40      | 0,90   | 70                | 4,09            | 1,08 | 84     | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 2 | N | 0 | 2 | F | C | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 4,54      | 1,20   | 93                | 5,45            | 1,44 | 112    | 120 | 1740   | -   | -    | 1/4" F |
| 1             | T | 1 | 2 | N | 0 | 2 | F | C | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 5,48      | 1,45   | 112               | 6,58            | 1,74 | 134    | -   | -      | 120 | 1740 | 1/4" F |
| 1             | T | 1 | 5 | N | 0 | 2 | F | B | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 3,97      | 1,05   | 47                | 4,76            | 1,26 | 56     | 107 | 1552   | -   | -    | 1/4" F |
| 1             | T | 1 | 5 | N | 0 | 2 | F | B | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 4,68      | 1,24   | 56                | 5,61            | 1,48 | 67     | 107 | 1552   | -   | -    | 1/4" F |
| 1             | T | 1 | 5 | N | 0 | 2 | F | B | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 5,78      | 1,53   | 70                | 6,94            | 1,83 | 84     | 107 | 1552   | -   | -    | 1/4" F |
| 1             | T | 1 | 5 | N | 0 | 2 | F | B | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 7,76      | 2,05   | 93                | 9,31            | 2,46 | 112    | 95  | 1378   | -   | -    | 1/4" F |
| 1             | T | 1 | 5 | N | 0 | 2 | F | B | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 9,29      | 2,46   | 112               | 11,15           | 2,95 | 134    | -   | -      | 95  | 1378 | 1/4" F |
| 1             | T | 2 | 0 | N | 0 | 2 | F | B | 7 | M                               | L            | 6                               | A                                | V                 | 0                   | 7,8       | 2,05   | 47                | 9,3             | 2,46 | 56     | 57  | 827    | -   | -    | 1/4" F |
| 1             | T | 2 | 0 | N | 0 | 2 | F | B | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 9,3       | 2,46   | 56                | 11,2            | 2,96 | 67     | 57  | 827    | -   | -    | 1/4" F |
| 1             | T | 2 | 0 | N | 0 | 2 | F | B | 7 | M                               | L            | 4                               | A                                | V                 | 0                   | 11,7      | 3,10   | 70                | 14,1            | 3,72 | 84     | 57  | 827    | -   | -    | 1/4" F |
| 1             | T | 2 | 0 | N | 0 | 2 | F | B | 7 | M                               | F            | 4                               | A                                | V                 | 0                   | 15,7      | 4,15   | 93                | 18,8            | 4,98 | 112    | 57  | 827    | -   | -    | 1/4" F |
| 1             | T | 2 | 0 | N | 0 | 2 | F | B | 7 | M                               | L            | 2                               | B                                | V                 | 0                   | 19,0      | 5,02   | 112               | 22,8            | 6,02 | 134    | -   | -      | 57  | 827  | 1/4" F |

Test with water @ 20°C.

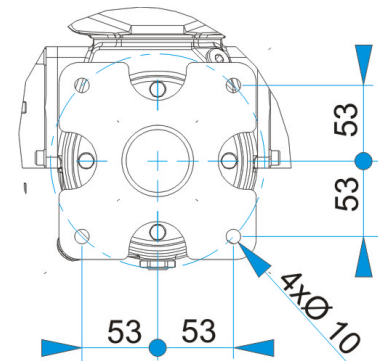


Allowable loads referred to pump nozzles

|       |         |       |          |
|-------|---------|-------|----------|
| $F_x$ | 0.10 kN | $M_x$ | 0.04 kNm |
| $F_y$ | 0.12 kN | $M_y$ | 0.04 kNm |
| $F_z$ | 0.10 kN | $M_z$ | 0.04 kNm |



FIXING HOLES – VIEW FROM Z



| PUMP MODEL  | DIMENSIONS [mm] |     |     |     | ESTIMATED WEIGHT<br>kg (without motor) |
|-------------|-----------------|-----|-----|-----|--|
|             | A               | B   | C   | D   |  |
| 1T06N02FC.. | BSPP 1/4"F      | 144 | 144 | 282 | 30                                     |
| 1T08N02FC.. | BSPP 1/4"F      | 144 | 144 | 282 | 30                                     |
| 1T10N02FC.. | BSPP 1/4"F      | 144 | 144 | 282 | 30                                     |
| 1T12N02FC.. | BSPP 1/4"F      | 149 | 149 | 279 | 30,5                                   |
| 1T15N02FB.. | BSPP 1/4"F      | 126 | 126 | 279 | 30,5                                   |
| 1T20N02FB.. | BSPP 1/4"F      | 149 | 149 | 279 | 30,5                                   |

| Electric motor size | 2 Poles kw | 4 Poles kw | 6 Poles kw | TEFC<br>1xM16x1.5 |    | EExde<br>1xM25x1.5 |    |
|---------------------|------------|------------|------------|-------------------|----|--------------------|----|
|                     |            |            |            | E                 | kg | E                  | kg |
| 63                  | 0.18       | 0.12       | 0.12       | 193               | 4  | 224                | 16 |